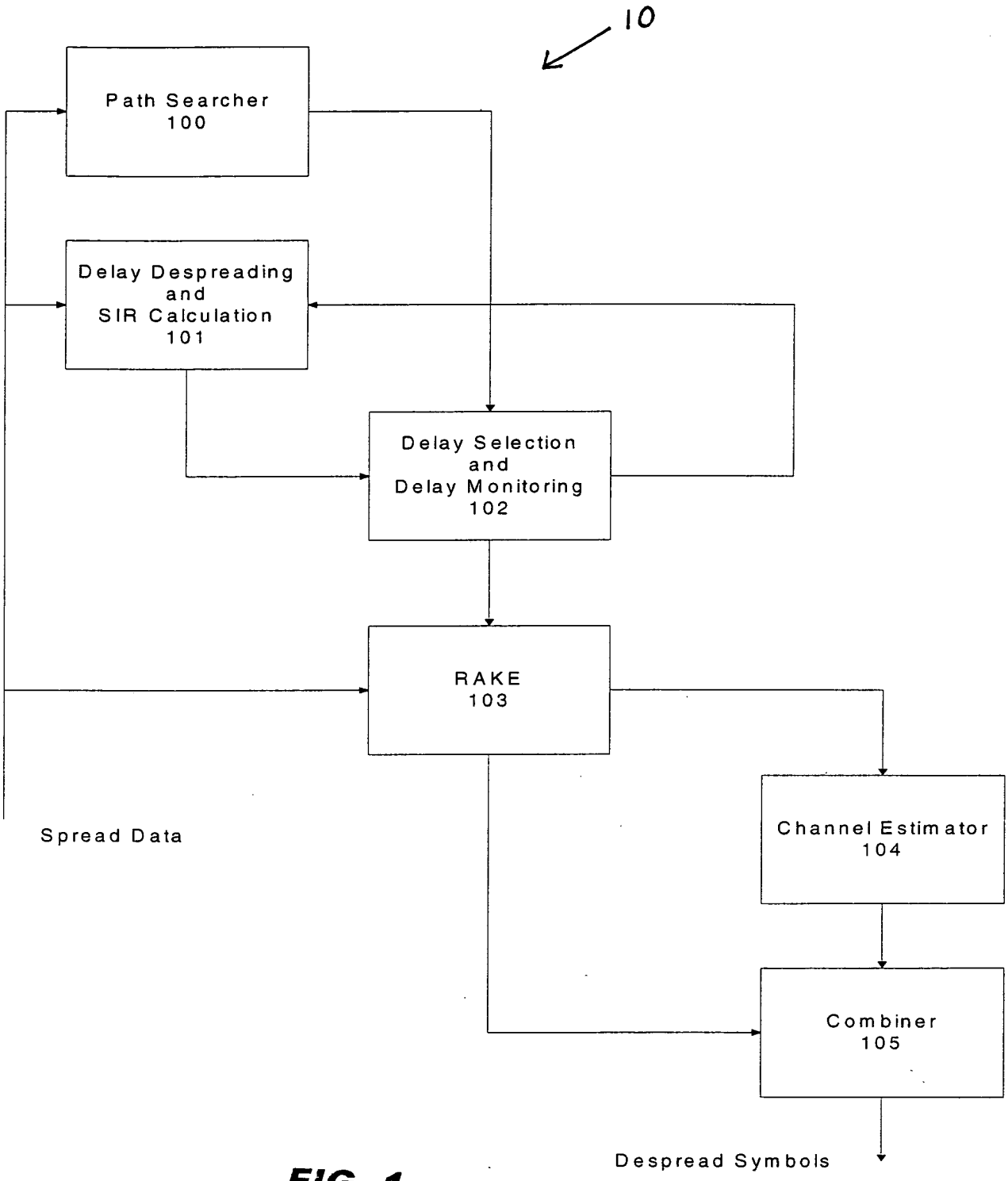

10
Path Searcher
100
Delay Despreading
and
SIR Calculation
101
Delay Selection
and
Delay Monitoring
102
RAKE
103
Channel Estimator
104
Combiner
105
Spread Data
Despread Symbols

FIG. 1

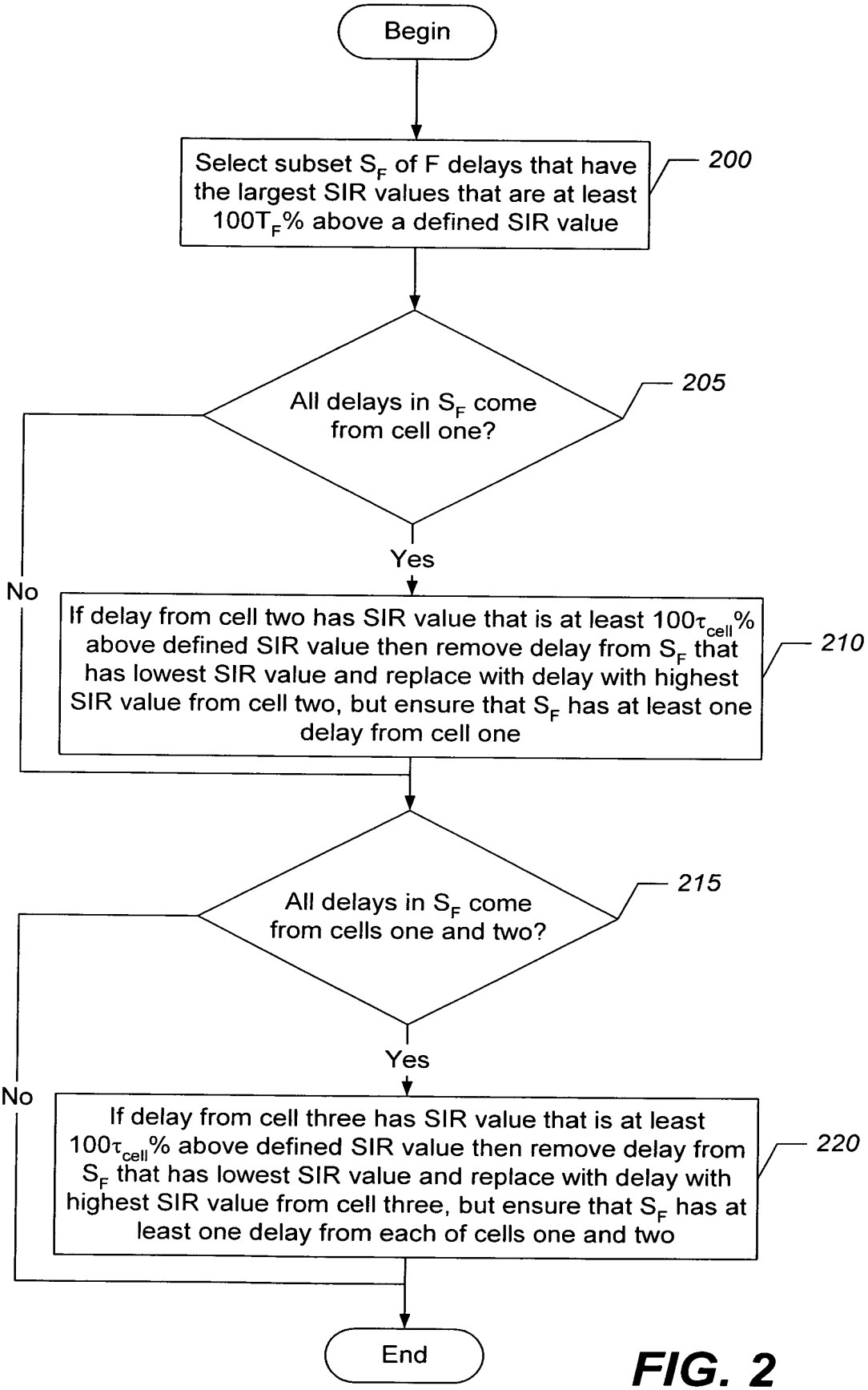

Begin
Select subset S_F of F delays that have the largest SIR values that are at least $100T_F$% above a defined SIR value
200
All delays in S_F come from cell one?
205
Yes
No
If delay from cell two has SIR value that is at least $100\tau_{cell}$% above defined SIR value then remove delay from S_F that has lowest SIR value and replace with delay with highest SIR value from cell two, but ensure that S_F has at least one delay from cell one
210
All delays in S_F come from cells one and two?
215
Yes
No
If delay from cell three has SIR value that is at least $100\tau_{cell}$% above defined SIR value then remove delay from S_F that has lowest SIR value and replace with delay with highest SIR value from cell three, but ensure that S_F has at least one delay from each of cells one and two
220
End

FIG. 2

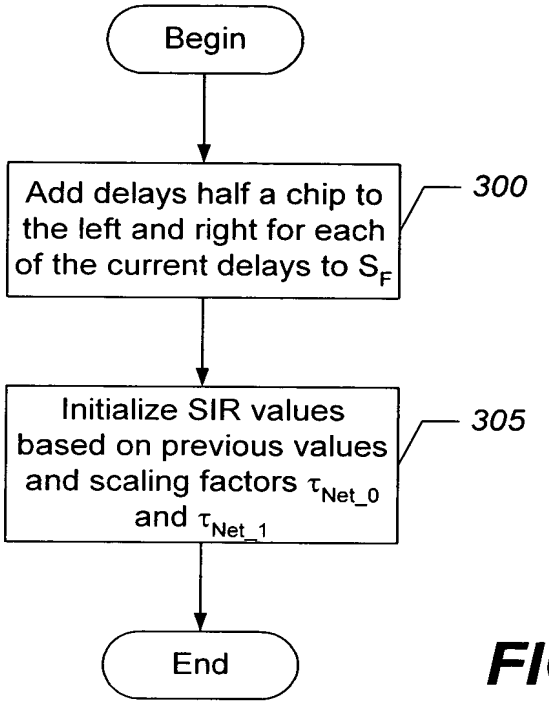

Begin
Add delays half a chip to the left and right for each of the current delays to S_F
300
Initialize SIR values based on previous values and scaling factors τ_{Net_0} and τ_{Net_1}
305
End

FIG. 3A

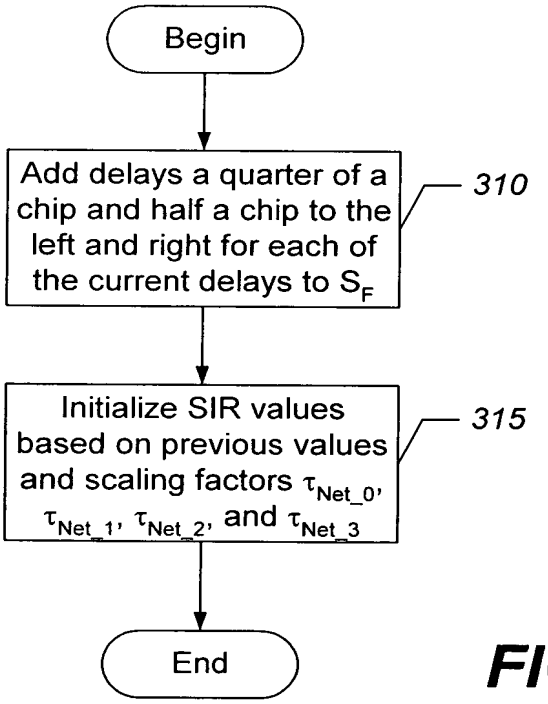

Begin
Add delays a quarter of a chip and half a chip to the left and right for each of the current delays to S_F
310
Initialize SIR values based on previous values and scaling factors τ_{Net_0}, τ_{Net_1}, τ_{Net_2}, and τ_{Net_3}
315
End

FIG. 3B

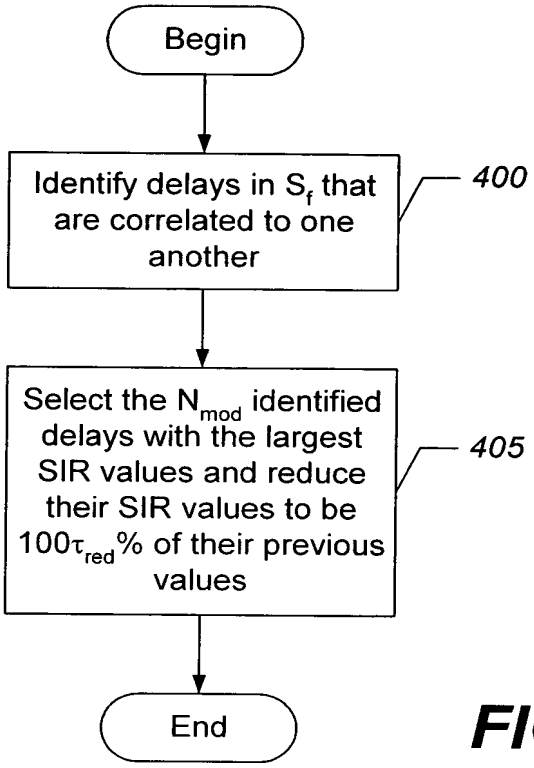

Begin
Identify delays in S_f that are correlated to one another
400
Select the N_{mod} identified delays with the largest SIR values and reduce their SIR values to be $100\tau_{red}$% of their previous values
405
End

FIG. 4A

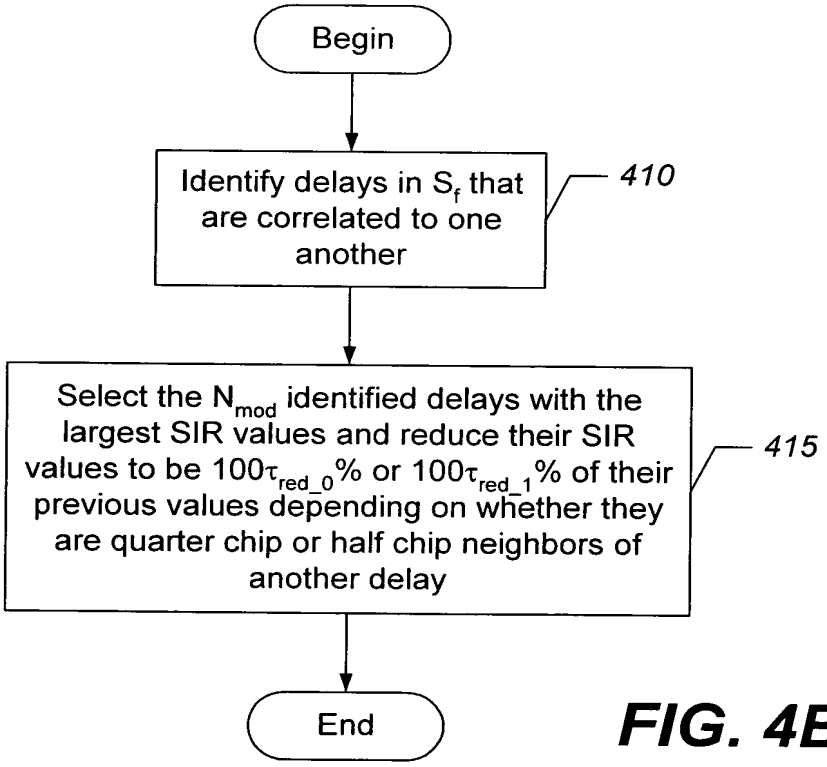

Begin
Identify delays in S_f that are correlated to one another
410
Select the N_{mod} identified delays with the largest SIR values and reduce their SIR values to be $100\tau_{red_0}$% or $100\tau_{red_1}$% of their previous values depending on whether they are quarter chip or half chip neighbors of another delay
415
End

FIG. 4B

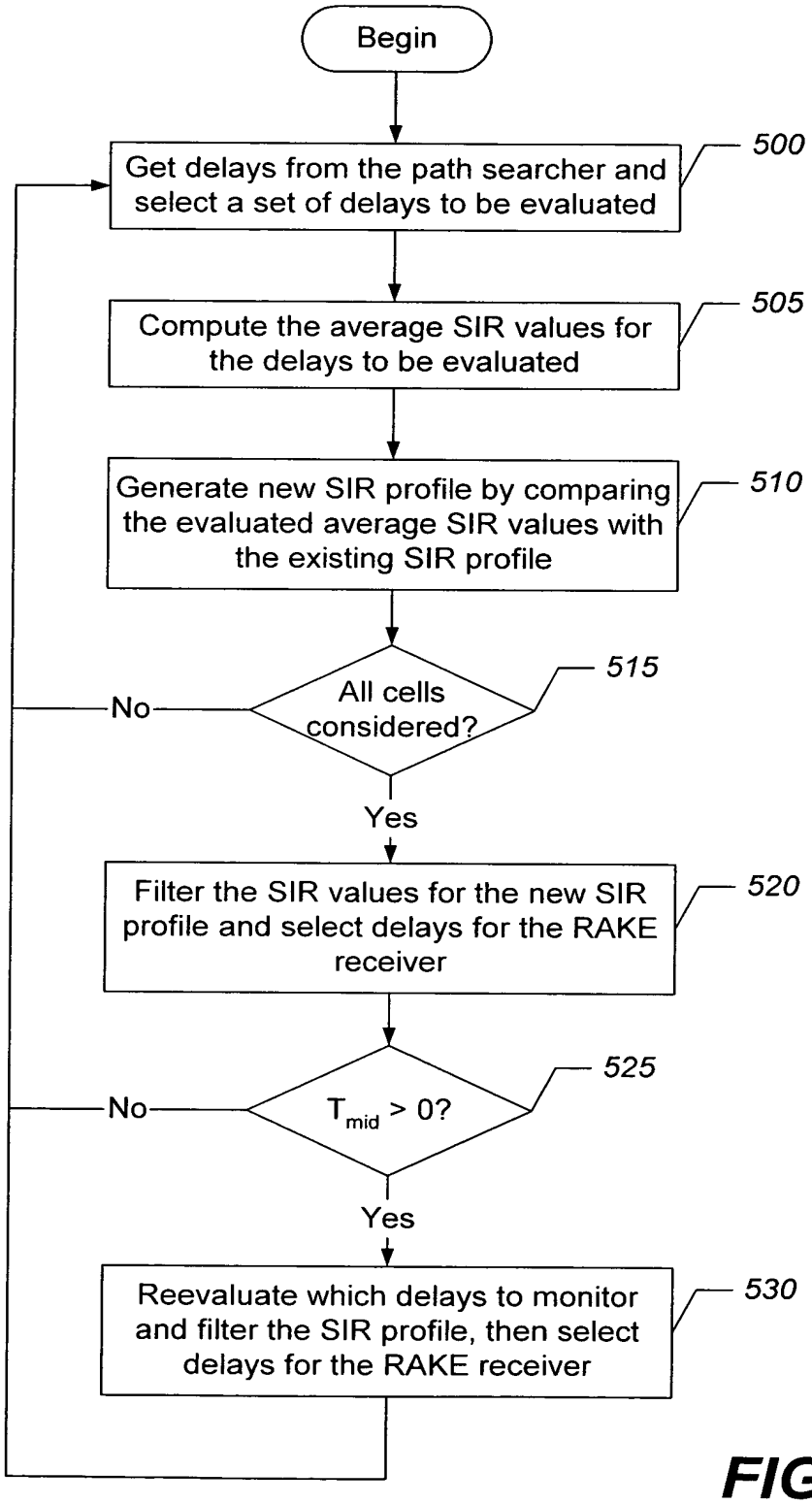
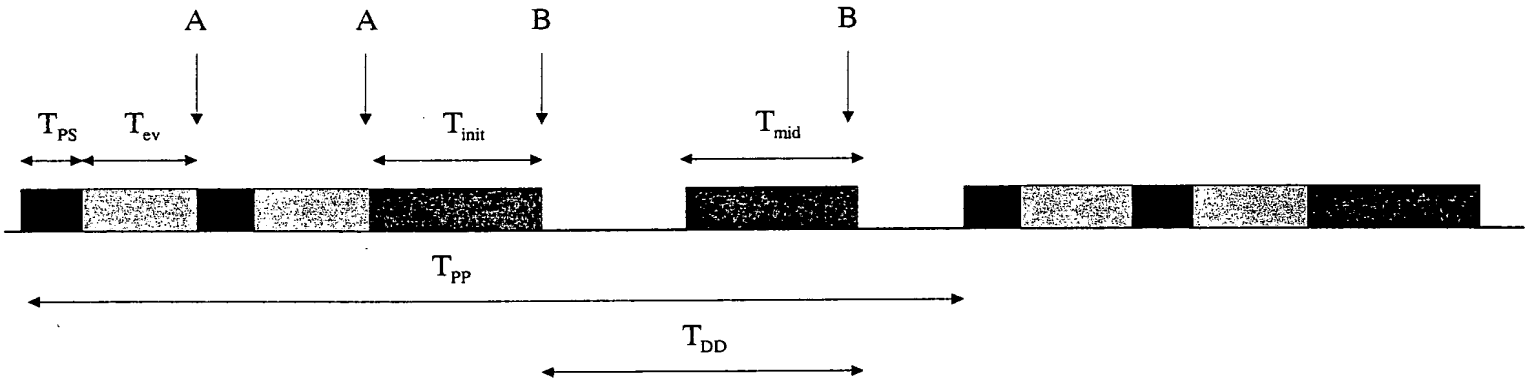

Begin
Get delays from the path searcher and select a set of delays to be evaluated
500
Compute the average SIR values for the delays to be evaluated
505
Generate new SIR profile by comparing the evaluated average SIR values with the existing SIR profile
510
All cells considered?
515
No
Yes
Filter the SIR values for the new SIR profile and select delays for the RAKE receiver
520
$T_{mid} > 0$?
525
No
Yes
Reevaluate which delays to monitor and filter the SIR profile, then select delays for the RAKE receiver
530

FIG. 5



Path searcher is active.

The SIR values are estimated for the newly found path searcher delays.

The SIR values are estimated for the chosen delays.

FIG. 6